



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,210	10/31/2003	Michael J. Nystrom	10030914-1	1502

7590 10/11/2005  
AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
Loveland, CO 80537-0599

EXAMINER

BROWN, JAYME L

ART UNIT PAPER NUMBER

1733

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/698,210

Applicant(s)

NYSTROM ET AL.

Examiner

Jayme L. Brown

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to the amendments and arguments filed on 8/19/05. All previous rejections of the claims under 35 U.S.C. 112, second paragraph are withdrawn in light of the amendments to the claims and in view of Applicant's arguments.

### ***Drawings***

2. The replacement drawing sheets were received on 8/19/05. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the Specification, there is no discussion of the method for making a stamper comprising of using a master having a structure to produce gaps on said stamper; therefore, it is new matter.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 5-6, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613).

Paragraph 9 of the Office Action dated 5/17/05.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613), as applied to claims 1-2, 5-6, 8, and 11 above, and further in view of Kondo (U.S. Patent 6,653,157).

Paragraph 10 of the Office Action dated 5/17/05.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613), as applied to claims 1-2, 5-6, 8, and 11 above, and further in view of Nishikawa et al. (U.S. Patent 6,730,459).

Paragraph 11 of the Office Action dated 5/17/05.

Art Unit: 1733

9. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613), as applied to claims 1-2, 5-6, 8, and 11 above, and further in view of Morita (U.S. Patent 6,814,897).

Paragraph 12 of the Office Action dated 5/17/05.

10. Claims 9-10, 13-14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613) and further in view of Morita (U.S. Patent 6,814,897), as applied to claims 1-2, 5-7, and 11-12 above, and further in view of Harden et al. (U.S. Patent 6,610,166).

Paragraph 13 of the Office Action dated 5/17/05.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613) and further in view of Morita (U.S. Patent 6,814,897), as applied to claims 1-2, 5-7, and 11-12 above, and further in view of Uehara (U.S. Patent 4,566,930) and Takakuwa et al. (U.S. Patent 6,280,660).

Paragraph 14 of the Office Action dated 5/17/05.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613) and further in view of Morita (U.S. Patent 6,814,897), as applied to claims 1-2, 5-7, and 11-12

Art Unit: 1733

above, and further in view of Fujita (U.S. Patent Application Publication: US 2004/0090571).

Paragraph 15 of the Office Action dated 5/17/05.

13. Claim 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. (EP 0,911,144) in view of Galarneau et al. (U.S. 5,597,613) and further in view of Morita (U.S. Patent 6,814,897), as applied to claims 1-2, 5-7, and 11-12 above, and further in view of Houlihan et al. (U.S. Patent 6,700,708).

Paragraph 16 of the Office Action dated 5/17/05.

14. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (U.S. Patent 6,814,897) in view of Harden et al. (U.S. Patent 6,610,166).

Morita teaches a method for making a stamper comprising: pouring a UV curing liquid resin into the concavity-protubrance surface (structures to produce gaps) of the father (master) and then placing a transparent plate, such as a glass plate, upon the liquid resin to avoid introducing bubbles. UV radiation is then applied through the transparent plate, causing the resin to cure. The cured resin and transparent plate are then peeled off the father, and they make up the mother (stamper) (Column 10, lines 14-19; Column 10, line 65 – Column 11, line 20; Figure 3A).

Morita is silent towards removing the excess material from the coated stamper blank. It is conventional in lithographic processes to use solvents (chemical etching) to remove any excess material as shown for example by Harden et al. (Column 9, lines

Art Unit: 1733

50-58). One skilled in the art would have readily appreciated removing the excess material to complete the stamper blank. Also, one skilled in the art would have readily recognized that the resin could be applied to either the stamper blank or the master as they are alternate expedients obvious over one another and result in the same end product. It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the excess material to complete the stamper in the method of Morita as suggested by Harden et al. since it is conventional in the lithographic processes.

15. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (U.S. Patent 6,814,897).

Morita teaches a method for making a stamper comprising: pouring a UV curing liquid resin into the concavity-protubrance surface (structures to produce gaps) of the father (master) and then placing a transparent plate, such as a glass plate, upon the liquid resin to avoid introducing bubbles. UV radiation is then applied through the transparent plate, causing the resin to cure. The cured resin and transparent plate are then peeled off the father, and they make up the mother (stamper) (Column 10, lines 14-19; Column 10, line 65 – Column 11, line 20; Figure 3A). One skilled in the art would have readily appreciated that the resin could be applied to either the stamper blank or the master as they are alternate expedients over one another and result in the same end product. It would have been obvious to one of ordinary skill in the art at the time

the invention was made to apply the resin to either the stamper or the master in the method of Morita, since they will result in the same end product.

### ***Response to Arguments***

16. Applicant's arguments filed 8/19/05 have been fully considered but they are not persuasive. Applicant argues that the trap portion 3 disclosed in Hamanaka et al. is not the same as the gap of claim 1. The rejection of claim 1 (see paragraph 6 above) acknowledges that Hamanaka et al. is silent toward having gaps and explains why it would be obvious to include gaps.

Hamanaka et al. is silent toward providing a first and second stamper each comprising of a mold and being separated by a gap. One skilled in the art would have readily appreciated that the microlens arrays from the teachings of Hamanaka et al. could be made using multiple stampers that are separated by gaps. The resin would be applied to the stampers, a large glass substrate would be placed on the resin in the stamper molds, and then the substrate would be diced. It is well known to use multiple stampers as shown for example by Galarneau et al. who teaches using quartz master elements (stampers) for tiling a large area diffractive optical element (Column 1, line 49 – Column 2, line 35; Column 5, line 45 – Column 6, line 12). The gaps (dicing areas) from the single stamper with the plurality of concave portions would correspond to the gaps that would separate the multiple stampers. One skilled in the art would have readily recognized that the two are alternate expedients which are obvious over one another in the absence of unexpected results and results in the same end product



Art Unit: 1733

(microlens arrays). It is noted that the specification describes no criticality for having multiple stampers rather than one large stamper with multiple stamping regions separated from one another as shown for example in Figure 5 of Hamanaka et al. Also, one skilled in the art would have readily appreciated that using multiple stampers reduces manufacturing costs and provides additional weight reduction (Galarneau et al.: Column 1, lines 49-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple stampers that have molds in the method of Hamanaka et al. as suggested by Galarneau et al.

The Applicant did not provide a complete or thorough rebuttal of the prima facie case of obviousness.

Also the Applicant argues that Morita does not teach "gaps on said stamper"; however, Figure 3A of Morita shows gaps on the stamper.

### ***Conclusion***

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

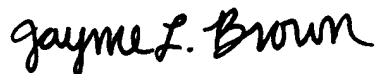
Art Unit: 1733

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jayme L. Brown** whose telephone number is **571-272-8386**. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jayme L. Brown



JOHN T. HARAN  
PRIMARY EXAMINER